University of Bristol Information Services

Creating standards-compliant web pages in XHTML

Practical workbook

Aims and Learning Objectives

The aim of this course is to enable you to create a simple but well designed website to XHTML standards.

When you have completed these exercises, you will be able to:

- create a simple but functional website to present information about yourself, department or other interest using essential XHTML elements
- apply fundamental good web design principles to your pages
- transfer your files from your local PC to a web server using the SSH Secure File Transfer program

Document information

Course files

This document and any associated practice files (if needed) are available on the web. To find these, go to www.bristol.ac.uk/is/learning/resources and in the **Keyword** box, type the document code given in brackets at the top of this page.

Related documentation

Other related documents are available from the web at:

http://www.bristol.ac.uk/is/learning/resources

Introduction

This course aims to equip you with the basic skills needed to create your own website. You will learn how to design and produce basic web pages using the (X)HTML language and how to integrate them into a well-organised and user-friendly website. The course will also cover useful design tips and techniques to improve your site, as well as how to put your website on line.

Prerequisites

This document assumes that you are familiar with the use of a computer keyboard and mouse, Microsoft Windows based products and the use of a web browser such as Mozilla Firefox or Internet Explorer.

Contents

Introduction to the World Wide Web

The World Wide Web (WWW) is part of the **Internet**, a network of interconnected computers, in other words the physical infrastructure used to transfer data (for example, emails, web documents etc.) between computers.

The WWW is a body of virtual information stored on **web servers**. A web server is a computer system that runs software to allow people to download content stored on it from their own computers, and where appropriate, upload content from local computer to server. The University has its own web servers connected to the Joint Academic NETwork (JANET). From home, you have to connect (you must be registered first) to the web server of an Internet Service Provider (ISP) to access the Internet.

Publishing information on the web

The HyperText Mark-up Language

(X)HTML (HyperText Mark-up Language) is a document layout and hyperlink specification **mark-up language** used to format text and information for the web; it is **NOT a programming language**. (X)HTML consists of **mark-up elements**. The syntax of a typical element is as follows:

```
<name attribute1="value" attribute2="value">text</name>
```

At its most basic form, an (X)HTML element usually consists of a **opening tag** (a name placed between angled brackets – `<name>`) and a corresponding **closing tag** (indicated by a forward slash before the tag name – `</name>`) wrapped around the content to be structured. Opening tags, may include one or more optional **attributes** carrying **values**, which modify the default behaviour and settings of the element. (X)HTML elements instruct **browsers** and other **user agents** (the generic term for software used to interpret webpages e.g. **screen readers**) on how to structure the content **semantically** (i.e. logically); for example:

- `<h1>heading level 1</h1>` - is a level 1 heading
- `<a href="http://www.bristol.ac.uk">University of Bristol</a>` - is a link to the University of Bristol homepage

A few elements do not contain anything and are hence known as **empty elements**; they are simply instructions that either point to a resource (e.g. an image) or insert an object, for example:

- `<img src="picture.jpg" width="100" height="100" alt="picture of something" />` – inserts an image.
- `<br />` - inserts a line break

Note the space and forward slash inserted before the final bracket to close the instruction within the one pair of brackets.

(X)HTML elements are the **building blocks** of the web. This means that (X)HTML is not going away. Since 1990, HTML standards as defined by the World Wide Web Consortium (W3C, see http://www.w3.org) have evolved considerably. Until recently, HTML 4.01 was the recommended standard, however it has been superseded by the eXtensible HyperText Mark-up Language (XHTML), which has now become the recommended standard. It can be **parsed** (interpreted) or as two languages simultaneously: HTML and XML; this helps ensure forward-compatibility of documents.